REMARKS

Claims 1, 3-12, 14-20, and 22 are pending in the present application. In the final Office Action, the Examiner rejected all of the claims. Applicant contends that novel distinguishing features are present in the claims, however, not clearly written. In response, Applicant is amending claims to better distinguish points of novelty and clarify the language of the claims. Applicant is also adding new claims 23-25. Applicant respectfully requests reconsideration based on the following amendments and remarks.

Rejection Under 35 USC §102

In paragraph 4, the Examiner rejected claims 1, 3, 4, 12, and 14 as being anticipated by *Williamson et al.* (USPN 5,027,410). Specifically, the Examiner contends that all elements of the claim 1 are disclosed in Figure 8 and the corresponding description of the Figure in col. 13, ln. 32-53. Applicant respectfully traverses this rejection.

Figure 8 and the cited portions of *Williamson et al.* disclose samples 130 entering the system and being "directed to a filter bank composed of octave filters 131-135 which separate the signal" according to frequency band for processing. Col. 13, ln. 35-40. "Gain calculations are made for each band in gain calculation functions 162 to 165...Based on the gain calculations the filter coefficients are calculated." Col. 13, ln. 46-47. Thus, the system of *Williamson et al.* must calculate the filter coefficients for each frequency band.

In contrast, claim 1 recites "digital ***filters arranged in at least one filter group***, wherein each filter group processes the audio signal for a particular frequency interval ... wherein ***each filter in the filter group is configured to process a selected frequency that is progressively lower than a prior filter.***" For example, a filter group may be tuned to frequencies in the highest octave, 20 kHz

to 10 kHz. Each filter within the filter group samples and filters the signal before passing the signal to the next filter in the filter group where each successive filter is configured to process a lower frequency that the one before it. *Williamson et al.* does not disclose having filter groups wherein successive filters in the same filter group process a selected frequency that is progressively lower than a prior filter. In fact, the cited portions of *Williamson et al.* do not disclose any use of filter groups at all. Instead, *Williamson et al.* merely discloses a single octave filter which begins a process to calculate filter coefficients (see Figure 8).

Further, claim 1 recites having "coefficients of each filter of the filter group configured for processing more than one frequency, wherein ***same coefficients are used for processing audio signals that are a factor of a frequency interval apart.***" Thus, for example, a first filter in a first filter group may share its coefficients with a first filter in a second filter group that is separate by one octave. It is quite evident that *Williamson et al.* cannot have the same coefficients used for processing audio signals from different frequency bands as the coefficients in *Williamson et al.* must be calculated separately for each frequency band according to the embodiment of Figure 8.

As such, claim 1 is not anticipated by *Williamson et al.* Further, since claims 3 and 4 depend from claim 1, claims 3 and 4 are also not anticipated by *Williamson et al.*

With regards to claim 12, in addition to the limitation of having filter groups comprising a plurality of filters, claim 12 also recites "a first filter of a first filter group configured to process a first frequency shares its coefficients with a second filter in a corresponding position of a second filter group configured to process a second frequency that is spaced apart from the first frequency by a factor of a frequency interval." Thus, for example, the first filter of the first filter

group will share its coefficients with a first filter (same corresponding position) in the second filter group.

Nowhere in the cited portions of *Williamson et al.* are coefficients shared between filters. In fact, the coefficients must be calculated each time for a different frequency band according to *Williamson et al.* (see col. 13, ln. 44-48) For these reasons, claim 12 is not anticipated by *Williamson et al.* Additional, because claim 14 depends from claim 12, claim 14 is not anticipated for the same reasons.

Rejection under USC §103

In paragraph 6, the Examiner rejected claims 5-11 and 15-20 as being unpatentable over *Williamson et al.* in view of *Menkhoff et al.* (USPN 6,137,349). Applicant respectfully traverses this rejection.

As shown above, *Williamson et al.* does not disclose the use of filter groups comprising a plurality of filters or sharing of coefficients between filters. The addition of *Menkhoff et al.* does not cure the deficiencies in *Williamson et al.* To establish a *prima facie* case of obviousness requires all the claim limitations to be taught or suggested by the prior art. *In re Royka,* 490 F.3d 981 (CCPA 1974). As the combination of *Williamson et al.* and *Menkhoff et al.* fails to teach each and every limitation of the claimed invention, claims 5-11 and 15-20 are not obvious over *Williamson et al.* in view of *Menkhoff et al.*

In paragraph 7, the Examiner rejected claim 22 over *Williamson et al.* in view of *Malcolm* (Lyon's Cochlear Model). Similarly, the addition of *Malcolm* does not cure the deficiencies in *Williamson et al.* As such claim 22 is not obvious over *Williamson et al.* in view of *Malcolm.*

Conclusion

Based on the foregoing amendments and remarks, Applicant believes the rejections to the claims have been overcome, and that the present application is in condition for allowance. If the Examiner has any questions regarding the case, the Examiner id invited to contact Applicant's undersigned representative.

Respectfully submitted,

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Date: 3/17/05

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